(19) World Intellectual Property Organization International Bureau

(10) International Publication Number

(43) International Publication Date 13 April 2006 (13.04.2006)

(51) International Patent Classification: A23B 7/144 (2006.01)

(21) International Application Number:

PCT/US2005/035550

(22) International Filing Date: 3 October 2005 (03.10.2005)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10/956,660 1 October 2004 (01.10.2004) US Not furnished 30 September 2005 (30.09.2005) US

(71) Applicant (for all designated States except US): TROP-ICANA PRODUCTS, INC. [US/US]; 1001 13th Avenue E, Bradenton, FL 34208 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SCHROEN, Jeffery, P. [US/US]; 24745 Golden Oat Circle, Cary, IL 60013 (US). HITCHCOCK, Bryan, W. [US/US]; 384 E. Pine Lake Circle, Vernon Hills, IL 60061 (US). CHUNG, Yongsoo [KR/US]; 125 N. Wilson Court, Palatine, IL 60067 (US).

(74) Agent: RYNDAK, James, D.; Ryndak & Suri LLP, 200 W. Madison Street, Suite 2100, Chicago, IL 60606 (US).

WO 2006/039674 A2

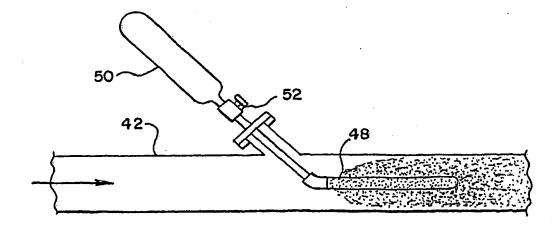
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LY, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: SYSTEM AND METHOD FOR NITROGEN SPARGING OF CITRUS JUICE



(57) Abstract: A system and method are disclosed for the processing of a citrus juice for packaging in which the juice is sparged with numerous small bubbles of nitrogen gas at one or more locations during the processing to reduce the levels of dissolved oxygen in the juice and the levels of oxygen in the packaging head space to improve the taste and sensory qualities of the citrus juice and/or to introduce turbulence to the juice. The resulting citrus juice has a dissolved oxygen level less than 0.45 ppm.

2006/039674 A2